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GUIDELINES FOR
SELECTION OF FINISHED ZUGGRAIN
LEATHER FOR BOOT AND SHOE UPPERS

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GUIDELINES FOR SELECTION OF FINISHED ZUGGRAIN LEATHER FOR BOOT AND SHOE UPPERS

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Indian Standard

GUIDELINES FOR SELECTION OF FINISHED ZUGGRAIN LEATHER FOR BOOT AND SHOE UPPERS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 6 June 1979, after the draft finalized by the Leather Sectional Committee had been approved by the Chemical Division Council.

0.2 Zuggrain upper leather is used for the manufacture of ankle boots intended to be used by the army and other heavy duty purposes. To cultivate a uniform practice of inspection/selection the Leather Sectional Committee decided to formulate this standard.

0.3 Finished leather selection is mainly based on visual inspection and the criteria of a better grade depends upon the utility value of the entire area.

1. SCOPE

1.1 This standard prescribes guidelines for selection procedure of finished zuggrain leather for boot and shoe uppers.

1.1.1 This standard does not lay down specification of quality.

2. TERMINOLOGY

2.1 For the purpose of this standard, definitions given in IS : 1640-1960* shall apply.

3. DESCRIPTION

3.1 Zuggrain upper leather is made from cow hides of good substance and young buffalo hides. The leather is full chrome tanned and finished black with zuggrain print. The thickness of the leather in a side shall be 2 to 3 mm at the butt, 1.5 to 2.5 mm at the shoulder and 1.00 mm minimum at the belly.

*Glossary of terms relating to hides, skins and leather.

4. GUIDELINES FOR SELECTION/INSPECTION

4.1 Procedure — Carry out a general visual inspection of the consignment delivered, to check that the delivery is in fact of the design which it is intended to be. Secondly, check whether the delivery appears to be homogeneous in regard to origin markings, source of production, period of manufacture and any other visually ascertainable characteristics such as finish and feel which bear on homogeneity. If the delivery appears to be homogeneous in the above respects treat the delivery as one lot for the purpose of sampling for laboratory testing as well as for visual bulk inspection. If the delivery does not appear to be homogeneous, segregate it into separate groups, each group homogeneous within itself and treat each group as a separate lot for both purposes.

4.2 Defects — The defects likely to be encountered in a lot of zuggrain upper leather include those which require testing of samples in the laboratory and others which are detectable visually and should be checked during selection/inspection. These defects also influence the serviceability value of the item.

4.2.1 Defects which require laboratory testing include the following:

- a) Nature of raw material used for the manufacture of leather. This will be identified under microscope,
- b) Type of tannage and pH of the leather — by chemical analysis.
- c) Strength (tensile and tear) of the leather — by tensile strength machine,
- d) Fastness of the finish and prints — by wet/dry rubbing method and print by repeated flexing,
- e) Fat content — chemical analysis, and
- f) Chrome content — (Cr_2O_3) — chemical analysis.

4.2.2 Major and minor defects which are visually detectable and should be checked during selection/inspection are given in Tables 1 and 2.

TABLE 1 LIST OF MAJOR DEFECTS

(Clause 4.2.2)

OT	FLAY CUTS/ BUTCHER CUTS	CUTS, HOLES	POCK MARKS/ PIN HOLES	GRAIN DAMAGE DUE TO PUTRE- FACTION	BRAND MARKS	GRAIN BLEMISHES/ SCRATCHES	TEXTURE (HARD/ HARSH/ LOOSE/ EMPTY) AND UNDER GAUGE	WHETHER CRACKS DEVELOP ON TWO FOLDS WITH GRAIN SIDE OUT
	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
ion	Butt, shoulder & belly	Butt	Butt, shoulder and belly	Butt and shoulder	Butt and shoulder	Butt and shoulder	Butt, shoul- der and belly	Butt, shoul- der and belly
	2.5 cm or more	7.5 cm or more	—	1.3 cm or more	7.5 cm or more	7.5 cm or more	—	—
er atted	If more than one or present in clusters or spread out thus affecting the cutting area, such a side should not be accepted	Not more than one permitt- ed in a side	Should not be spread out over a large area affect- ing the cutt- ing value	If more than one and spread out covering a large area, then such a side should not be accep- ted	Not more than one permitted in a side	Not more than one permitted in a side	If this de- fect is pre- sent in any region of the side, it should be rejected	If this defect is present in any region of the side, it should be rejected

TABLE 2 LIST OF MINOR DEFECTS

(Clause 4.2.2)

SL No,	DEFECT	FLAY CUTS/ BUTCHER CUTS	DEEP CUTS/ HOLES	BRAND MARKS	GOAD MARKS/ YOKE MARKS	LOOSE FLESH	THICKNESS (MORE THAN 3 mm)	TEXTURE BIT LOOSE/ SPONGY/ HARD/ STIFF
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
i)	Location	Butt, shoulder and belly (either at one place or far apart but not in the centre of butt)	At the junction of butt, shoulder or belly	Butt, shoulder and belly (should not be in the centre of butt)	Butt, shoulder and belly (should not affect the cutting value)	Butt, shoulder and belly	In butt only	In belly only
ii)	Size	Less than 2.5 cm in length	Less than 7.5 cm in length	Up to 5 cm	Less than 7.5 cm	—	—	—
iii)	Number permitted	Not more than three permitted	Not more than one permitted	Not more than one permitted in a side	Not more than one permitted in a side	This is rectifiable by shaving/ buffing	This is rectifiable by repeating shaving operations	This is rectifiable by staking/ trimming off the defective portions

NOTE 1 — Leather having one of these defects may be accepted provided the defective area is less than 5 percent of the total area in a side. However, these defective areas are to be marked on defective sides and proportionate area deductions shall be made.

NOTE 2 — If the defective area exceeds 5 percent of the total area then the defect shall be considered as major defect and the leather side shall be rejected.